

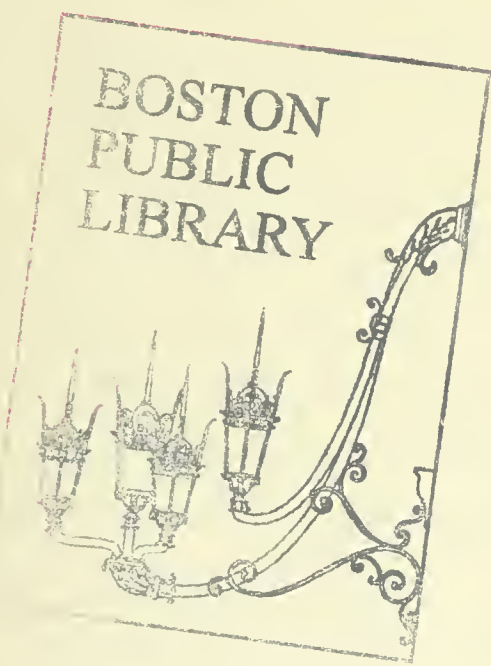
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CABOT ESTATE
SUMMARY OF ALTERNATIVE DEVELOPMENT SCHEMES
BOSTON REDEVELOPMENT AUTHORITY

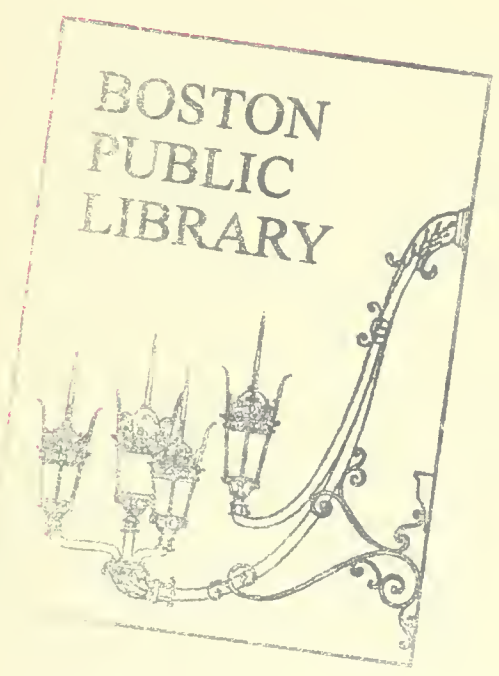
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CABOT ESTATE

SUMMARY OF ALTERNATIVE DEVELOPMENT SCHEMES

BOSTON REDEVELOPMENT AUTHORITY

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I. BACKGROUND

The City of Boston as well as the community of Jamaica Plain are concerned with the impact of development on the Cabot Estate. As a result of this concern, the Boston Redevelopment Authority has been requested to undertake a series of planning and design studies. A variety of reports both written and visual have been prepared. This study represents a summary of the highlights of this work.

II. METHODOLOGY

Seven alternative forms of development on the Cabot Estate have been studied by the BRA. These are as follows:

1. 150 cluster condominium units
2. 150 linear condominium units
3. 350 linear condominium units
4. 350 megastructure rental units
5. 650 one tower rental units
6. 650 three tower rental units
7. 750 three tower rental units

Each of the above alternatives has been evaluated in terms of ten (10) basic concerns. These factors are:

1. Building mass, i.e., total square footage
2. Parking demand
3. Density - the number of units per acre on the site relative to the total site area (gross) and the developed portion of the site (net).
4. Conservation - the percentage of land left undeveloped.
5. Building height and number of buildings
6. School children generated (estimate)

7. City taxes generated (estimate)
8. Preliminary estimate of rental or sales price of unit
9. Projected feasibility of marketing the proposal
10. Household characteristics expected for given alternative

A comparison of each of the seven alternatives in terms of the 10 major concerns has revealed a variety of interesting facts. Some of the conclusions are constant for a given density of development. Others vary with the form of the development. Those characteristics which either highlight the similarities or differences between the alternatives are described below.

III. CONCLUSIONS

A. 150 UNIT CONDOMINIUM ALTERNATIVES

1. Assumptions Constant for 150 Unit Cluster and Linear Schemes

a. Mass

The highest number of square feet per unit (2,000) and the lowest total square footage (300,000).

b. Parking

Two (2) parking spaces provided for each unit and the lowest total number of parking spaces (300).

c. Density

The lowest gross number of dwelling units per acre (6.5).

d. Public School Children

The second highest number of public school children; estimated average is 59.

e. City Taxes

Lowest estimated total yearly city taxes (\$364,000).

f. Prices

The estimated sales price per unit of these alternatives would be \$79,000. This assumes a development cost of \$22 a square foot,

a 10% before tax return on equity and a sales price based on, a rule of thumb, 100 times the estimated monthly rent.

g. Marketability and Staging

(1) The price of \$79,000 is above the average sales price of luxury condominium units in the Greater Boston area (around \$55,000) and the sales price of newly constructed single-family homes in Jamaica Plain (about \$40,000).

(2) The above alternatives would have to be reduced to around 1,500 square feet in size in order to lower the price to a range, \$61,000, which might be marketable.

(3) All town house condominium projects in the Greater Boston area have been staged or are a conversion from rental. There are no newly constructed condominium developments of 150 units in the Greater Boston area.

h. Household Characteristics

The experience of luxury town house condominium developments in the Greater Boston area indicate that they tend to attract older households whose children no longer live at home.

2. Distinct Characteristics of 150 Unit Cluster Alternative

a. Conservation

(1) The least amount of land left undeveloped; 17.3 acres or 75% of the total site area.

(2) Although much of the site is covered, this alternative has the lowest net density, i.e., 26 dwelling units per acre of developed area.

3. Distinct Characteristics of 150 Unit Linear Alternative

a. Conservation

This alternative is similar to the 350 megastructure and the 650 one (1) tower alternatives in the amount of land area left undeveloped, about 87%.

b. Buildings

The fewest number of buildings (5) and the lowest height (18 feet)

B. 350 UNIT ELEVATOR CONDOMINIUM AND RENTAL ALTERNATIVES

1. Assumptions Constant for 350 Unit Linear, Condominium and Megastructure, Rental Alternatives

Because of the difference in unit size, design, form of ownership, etc., there is only one distinct quality shared by both 350 unit alternatives.

a. Price

The average square foot price for construction is \$25 a square foot in contrast to \$22 a square foot for the 150 unit alternative. The higher costs result from elevator building construction. This same type of construction and costs are assumed for the 650 and 750 unit alternatives.

2. Distinct Characteristics of 350 Unit Linear Alternative

a. Unit Size

(1) The only alternative which assumes an average of 1,500 sq. ft. per unit.

(2) The total mass (525,000 sq. ft.) is almost as great as the mass of the 650 unit alternative (650,000 sq. ft.).

b. Conservation

The second lowest percentage of site left for open space (81%).

c. School Children

The highest number of public school children; estimated average is 64.

d. City Taxes

The yearly taxes estimated to be generated by 350 condominium units (\$662,000) are about 80% as great as the taxes (\$810,000) which would be generated by 650 apartment tower rental units. (This assumes both projects could be marketed).

e. Price

The estimated sales price per unit is \$66,800. This assumes a \$25/sq. ft. development cost, a 10% before tax return on equity, and a sales price based on, the rule of thumb, 100 times the estimated monthly rent.

f. Marketability

(1) A sales price of \$61,400 is above the average price of existing condominium units in the Greater Boston area (\$55,000) and the sales price of newly constructed single family homes in Jamaica Plain (\$40,000). This alternative, on the other hand, would sell within the average price range of condominium units at Fuller Brook Park and Fairgreen Place (an average of \$72,000).

(2) There is only one proposal in the Greater Boston area for a condominium development as large as 350 units. The project proposed for Danvers would contain 360 condominium units which would sell for around \$45,000 and the project would be built in two stages of 150 units.

g. Household Characteristics

Unless the sales price of this alternative can be reduced considerably, it would seem that this alternative would also attract primarily older households whose children no longer live at home.

3. Distinct Characteristics of 350 Unit Megastructure Alternative

a. Unit Size

(1) Average size unit is 1,000 sq. ft.

(2) Total mass is only slightly larger (350,000 sq. ft. vs. 300,000 sq. ft.) than the mass of the 150 unit alternatives.

b. School Children

This alternative is projected to generate the lowest number of public school children.

c. Prices

The estimated rental of this unit (assuming \$25/sq. ft. development cost, 1,000 sq. ft. per unit, 10% before tax return on equity) would be \$423 a month.

d. Marketability

A rent of \$423 a month is outside the 5% margin range of marketable luxury rents in 1971 but inside the range of projected marketable rents in 1972.

C. 650 UNIT ELEVATOR RENTAL ALTERNATIVES

1. Assumptions Constant for 650 Unit One Tower and Three Tower Alternatives

a. Density

The second highest gross density - 28 units per acre.

b. Building Height

The height of the towers in the 650 and 750 unit alternatives is 22 stories or 198 feet.

c. Taxes

The second highest estimated amount of yearly taxes (\$809,000).

d. Prices

The estimated rent per unit for the 650 elevator alternatives is \$404 a month.

e. Marketability

A rent of \$404 a month would be within the 5% margin range of projected marketable luxury apartment rents.

2. Distinct Characteristics of 650 One (1) Tower Elevator Rental Alternative

a. Conservation

The percentage of land left in open space (85%) is slightly less than the 150 linear (87%) and the 350 megastructure (89%) alternatives.

3. Distinct Characteristics of 650 Three (3) Tower Elevator Rental Alternative

a. Density

The second highest net density; 310 units per acre of developed area.

b. Conservation

The highest percentage of land area left undeveloped (91%).

D. 750 UNIT ELEVATOR RENTAL ALTERNATIVE

1. Distinct Characteristics of 750 Unit Alternative

a. Mass

The highest total square footage (750,000 sq. ft.).

b. Parking

The highest total number of parking spaces (1,238).

c. Density

(1) The highest gross density (32 dwelling units per acre).

(2) The highest net density (312 units per acre of developed area).

d. Conservation

The second highest percentage of land left undeveloped.

e. School Children

Of the elevator rental alternatives, the 750 unit development would generate the highest number of public school children (15).

f. City Taxes

The highest estimated total yearly city taxes (\$927,000 in contrast to \$364,000 for the 150 condominium unit alternative).

g. Prices

The estimated rent per unit for the 750 unit alternative is \$401 a month.

h. Marketability

A rent of \$401 a month would be within the 5% margin range of projected marketable luxury apartment rents.

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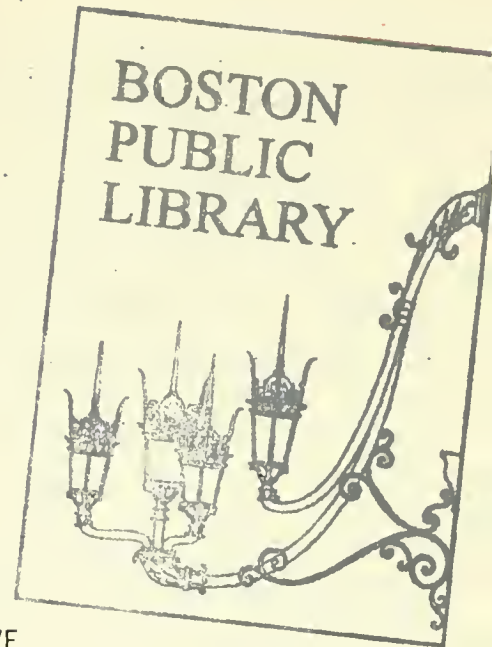
SUMMARY COMPARISON

Ownership		Town House Condominium						Rental							
Construction		Frame				Elevator									
Density		150 Units				350 Units				650 Units				750 Units	
Form		Cluster		Linear		Linear		MEGA Structure		1 Tower		3 Towers		3 Towers	
Factors															
Sq. Footage															
1. Per Unit		2,000		2,000		1,500		1,000		1,000		1,000		1,000	
2. Total		300,000		300,000		525,000		350,000		650,000		650,000		750,000..	
Parking															
3. Spaces/Unit		2		2		2		1.65		1.65		1.65		1.65	
4. Total		300		300		700		578		1,073		1,073		1,238	
Density (dwelling units/acre)															
5. Gross		6.5		6.5		15.3		15.3		28.3		28.3		32.7	
6. Net		26		52		78		140		185		310		312	
Land Coverage			%		%		%		%		%		%		%
7. Acres Developed		5.7	25	2.9	13	4.5	19	2.5	11	3.5	15	2.1	9	2.4	10
8. Acres Undeveloped		17.3	75	20.1	87	18.5	81	20.5	89	19.5	85	20.9	91	20.6	90
Buildings															
9. Total No.		9-18'		5-18'		73-54'		3-72'		4-72'		3-198'		3-198'	
10. Height										1-198'		7-63'		7-63'	
												3-27'		3-27'	
School Children															
11. Total		120-225		120-225		105-280		14-28		26-52		26-52		30-60	
12. Avg. Public Schl.		59		59		64		9		13		13		15	
City Taxes															
13. Rent/Unit /Month		\$ 789		\$ 789		\$ 614		\$ 423		\$ 404		\$ 404		\$ 401	
14. Taxes		\$364,000		\$364,000		\$662,000		\$455,000		\$809,000		\$809,000		\$927,000	

2

2

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PRICES, PROFITABILITY AND MARKETABILITY OF ALTERNATIVE
DENSITIES AND TYPES OF DEVELOPMENT ON THE CABOT ESTATE,
JAMAICA PLAIN.

BOSTON REDEVELOPMENT AUTHORITY

DISTRICT PLANNING

Laurence Koff

ASSISTED BY RESEARCH DEPARTMENT

Tina Freeman, Lowell Richard

May, 1971

WILLIAM
H. H. H. H.
1884



BACKGROUND

Site accommodation studies have been undertaken by the BRA design staff to test the visual impact of various alternatives of development upon the Cabot Estate. Basically, these alternatives are variations of two design schemes: low-rise frame and elevator town house condominiums and medium high-rise elevator rentals. In order to assist in evaluating the feasibility of these design alternatives, it was suggested that a financial feasibility analysis be undertaken.

THE PROBLEM

A financial feasibility analysis for the Cabot Estate must be undertaken in three stages. First, one has to determine what rents will result from each alternative given certain assumptions with respect to unit size, construction cost, financing, profit, etc. Second, one has to establish the average rent per unit which one assumes to be marketable. And finally, one must compare the projected rents to that figure which one assumes to be marketable. A project, then, is assumed to be financially feasible if the rents are within a reasonable (5%) range of marketability.

The preceeding steps have been followed. The conclusions are summarized below:

CONCLUSIONS

I. THE IMPACT OF A CHANGE IN DENSITY ON RENTS OR SALES PRICES

A. Elevator Rental Alternatives

Given the assumptions upon which this analysis is based, (1,000 square feet per unit, \$25 per square foot for development cost, \$1,200,000 for land, 10% before tax return on equity, 75% mortgage for 30 years at 9% interest) one finds THAT THERE IS NO SIGNIFICANT DIFFERENCE IN AVERAGE MONTHLY RENTS AT A DENSITY OF 350, 650, 750 AND 1,000 UNITS (SEE TABLE 1).

B. Town House Condominium Alternatives

GIVEN THE VARIABLE ASSUMPTIONS UPON WHICH THE TOWN HOUSE ANALYSIS IS BASED (\$22 per square foot development cost, 2,000 square feet per unit for the 150 unit alternative, and \$25 per square foot for development cost, 1,500 square feet per unit for the 350 unit alternative), and the rule of thumb that the sales price of condominiums are 100 times the monthly rent, ONE FINDS THAT THE 350 TOWN HOUSE UNIT ALTERNATIVE WOULD SELL FOR \$17,500 LESS THAN THE 150 UNIT ALTERNATIVE; \$61,400 VS. \$78,900. (See Table 2)

II. THE IMPACT OF A CHANGE IN DENSITY ON PROFIT

All the alternatives analyzed assume a before tax return on equity of 10%.

A. Elevator Rental Alternatives

Assuming a double-declining balance method of depreciation, THE AFTER TAX RETURN ON EQUITY IS ALMOST THE SAME AT A DENSITY OF 350 UNITS (13.2%) AS IT IS AT A DENSITY OF 1,000 UNITS (13.8%). (SEE TABLE 3)

B. Town House Condominiums

1. Without more knowledge concerning the sales of condominiums, one cannot establish what advantages in return, if any, would accrue by increasing the density from 150 to 350 units.
2. The sales prices of \$61,400 and \$78,900 assume a 10% return on equity before Federal taxes.

III. MARKETABILITY

A. Elevator Rental Alternatives

The market consultants to Pat Franchi, Minot, DeBlois and Maddison, projected in their report, Land Utilization and Marketability Analysis p. 32, that the average rent for a unit would be \$390 per month (in 1971 prices).

On the basis of this information one can assume (given a 5% margin) that the DENSITIES OF 650, 750, AND 1,000 UNITS WOULD BE MARKETABLE (SEE TABLE 4). THE RENTS AT A DENSITY OF 350 DWELLING UNITS, ON THE OTHER HAND, ARE JUST OUTSIDE THE 1971, 5% MARGIN RANGE.

B. Town House Condominium Alternatives

1. A rule of thumb exists which says that condominiums sell at 100 times their projected rent. Given this principle, the town house unit alternatives would sell at \$78,900 for 150 units and \$61,400 for the 350 unit alternatives.
2. The average price of luxury condominium units in the Greater Boston area is \$55,000.
3. The average price of condominium units in locations similar to the Cabot Estate (Fairgreen Place and Fuller Brook Park) is \$72,000.
4. There are no market studies in existence which indicate the demand, i.e., sales price and number of units, for condominium developments in the Jamaica Plain - Boston area.
5. The study, Land Utilization and Marketability Analysis, by Minot, DeBlois and Maddison indicated on page 17 that there is a demand in Boston for 1,000 single-family units a year. Sales of new single family homes in Jamaica Plain have been about \$40,000 per house.
6. BOTH TOWN HOUSE ALTERNATIVES WOULD HAVE TO SELL ABOVE THE AVERAGE PRICE OF EXISTING CONDOMINIUM UNITS IN THE GREATER BOSTON AREA AND THE SALES PRICE OF NEWLY CONSTRUCTED SINGLE FAMILY HOMES IN JAMAICA PLAIN.
7. THE 350 UNIT TOWN HOUSE ALTERNATIVE COULD SELL WITHIN THE RANGE OF CONDOMINIUM PROJECTS AT FULLER BROOK AND FAIRGREEN PLACE. THE 150 UNIT ALTERNATIVE WOULD HAVE TO BE REDUCED FROM AN AVERAGE UNIT SIZE OF 2,000 SQUARE FEET TO 1,500 SQUARE FEET IN ORDER TO SELL WITHIN THIS SAME RANGE (SEE TABLE 5).

IV. TAXES

A. Elevator Rental Alternatives

Assuming City taxes will be based upon 27% of gross revenue, THE RETURN TO THE CITY WOULD RANGE BETWEEN \$455,000 FOR 350 UNITS AND \$1,200,000 FOR 1,000 UNITS. (SEE TABLE 6)

B. Town House Condominium Alternatives

1. The analysis of town houses has treated a condominium development as a rental project in order to compute taxes and sales prices (see Methodology).

2. IF ONE ASSUMES A TAX OF 27% OF GROSS INCOME, THEN 150 TOWN HOUSES (AT 2,000 SQUARE FEET PER UNIT) WOULD GENERATE \$364,000 IN TAXES, IN CONTRAST TO \$622,000 IN TAXES FOR 350 UNITS (AT 1,500 SQUARE FEET PER UNIT) (See Table 6)

3. THE TAXES ESTIMATED TO BE GENERATED BY 350 CONDOMINIUM UNITS - \$662,000 - ARE ABOUT 80% AS GREAT AS THE TAXES (\$810,000) WHICH WOULD BE GENERATED BY 650 APARTMENT UNITS.

V. THE IMPACT ON RENTS WHEN THE COSTS ASSUMED FOR VARIOUS FACTORS ARE CHANGED

A. The Impact of a Change in Land Costs Upon Rent

IF ONE ASSUMES A LAND COST OF \$1,200,000, A 25% INCREASE OR DECREASE IN THIS PRICE WILL HAVE A MEASURABLE IMPACT ON RENTS ONLY AT THE LOWEST DENSITIES OF DEVELOPMENT, I.E., 150 AND 350 UNITS. IN ADDITION, THE COST OF LAND IS NOT AS SIGNIFICANT A FACTOR IN CONDOMINIUM DEVELOPMENTS AS IT IS IN RENTAL PROJECTS.

1. With the elevator apartment alternatives, for example, a 25% shift in land costs at a density of 350 units results in a \$10 difference in monthly rents in contrast to a difference of \$4 a month rent at a density of 1,000 units. (See Table 7)

2. If one assumes that the town house condominiums will sell at 100 times the monthly rental, one sees that a 25% decrease in land costs would result in a sale price shift for 150 units of from \$78,900 to \$76,900. Given the price of luxury housing, it would be difficult to prove that a \$2,000 change in sales price had a dramatic impact on the marketability of the unit. (See Table 8)

B. The Impact of a Change in Unit Size on Sales Price of 150 Unit Condominium Alternative

The impact of a change in unit size on rents is shown on Table 9. If the average unit is decreased from 2,000 to 1,500 square feet, the sales price will decrease by approximately \$18,000. IN OTHER WORDS, A 1/3 INCREASE IN UNIT SIZE IN THIS CASE RESULTS IN A 28% DECREASE IN SALES PRICE.

C. The Impact of a Change in Development Costs on Rents

The impact of a change in development costs is shown on Table 9. IF DEVELOPMENT COSTS IN THIS EXAMPLE ARE INCREASED BY 14%, FROM \$22 A SQUARE FOOT TO \$25 A SQUARE FOOT, RENTS INCREASE BY 9%.

METHODOLOGY

I. Process

The following process was followed to establish rents and, in turn, condominium prices.

A. Development cost for housing based on calculations of development cost per square foot and land cost was determined.

B. Yearly mortgage cost for above development budget was established.

C. Yearly operating costs, vacancy allowance, taxes and profit were added to yearly mortgage costs.

D. Above sum was divided by total number of units to determine cost per unit per year.

E. Yearly unit cost was divided by 12 to establish monthly unit cost.

F. This cost is the monthly rent. It represents that sum of money needed per unit per month to pay for mortgage costs, vacancy, operating expenses, taxes and profit.

G. The price for condominiums is assumed to be 100 times monthly rent. This procedure is highly generalized and should be recognized as only a rule of thumb estimate of sales price.

II. Assumptions Constant for Analysis of All Alternatives

A. Land cost = \$1,200,000

B. Operating cost = \$.75/sq. ft./year

C. Vacancy factor = 5% of gross income

D. City taxes = 27% of gross income

E. Return on equity before Federal taxes = 10%

F. Mortgage terms = 75% first mortgage at 9% interest for 30 years

G. Equity = 25% of development costs

III. Variable Assumptions

A. Elevator rental (350, 650, 750 units)

1. size of units = 1,000 square feet

2. development cost = \$25/sq. ft.

B. Elevator condominium (350 units)

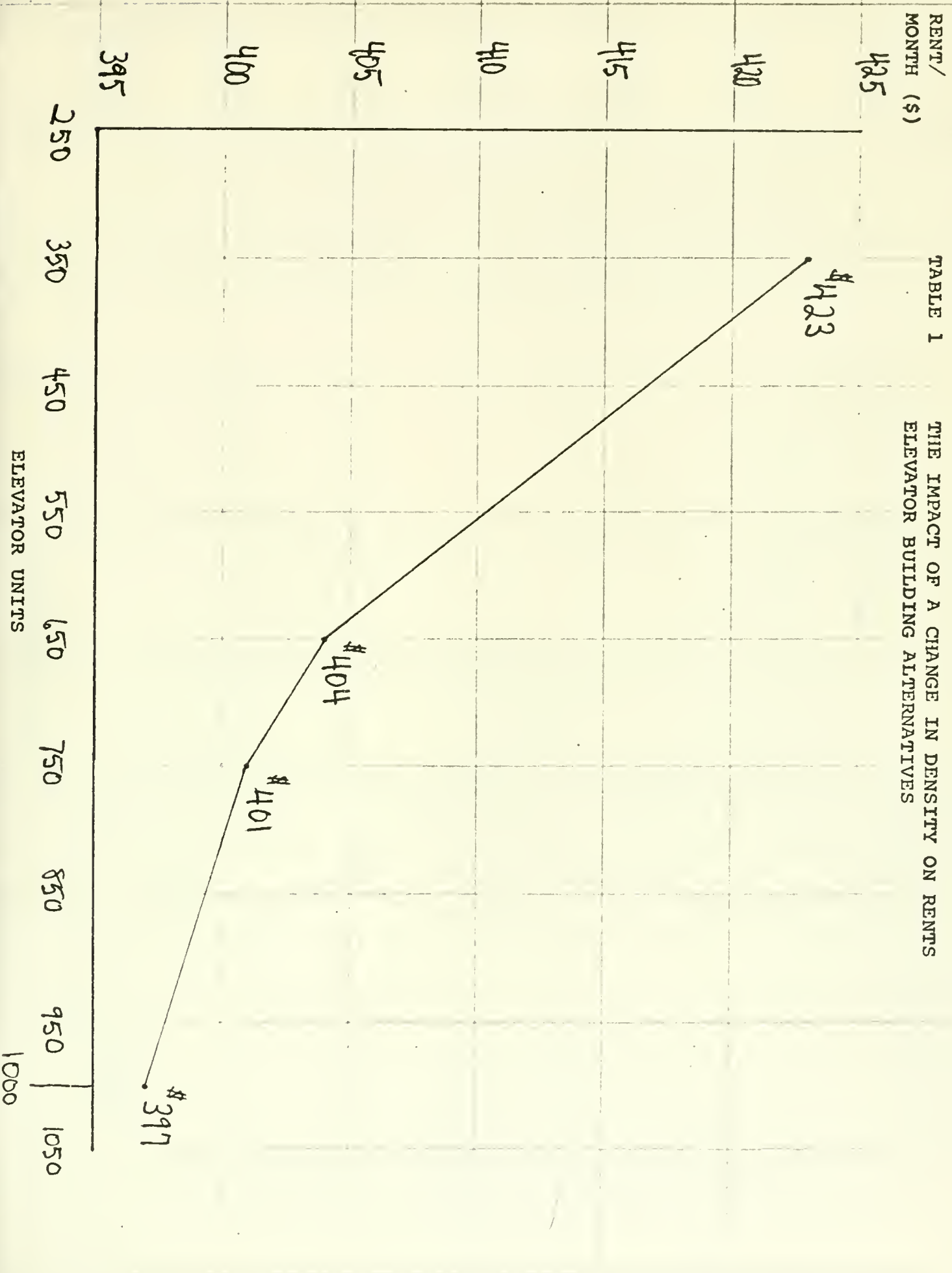
1. size of unit = 1,500 square feet

C. Town house condominium (150 units)

1. size of unit = 2,000 square feet

2. development cost = \$22/sq. ft.

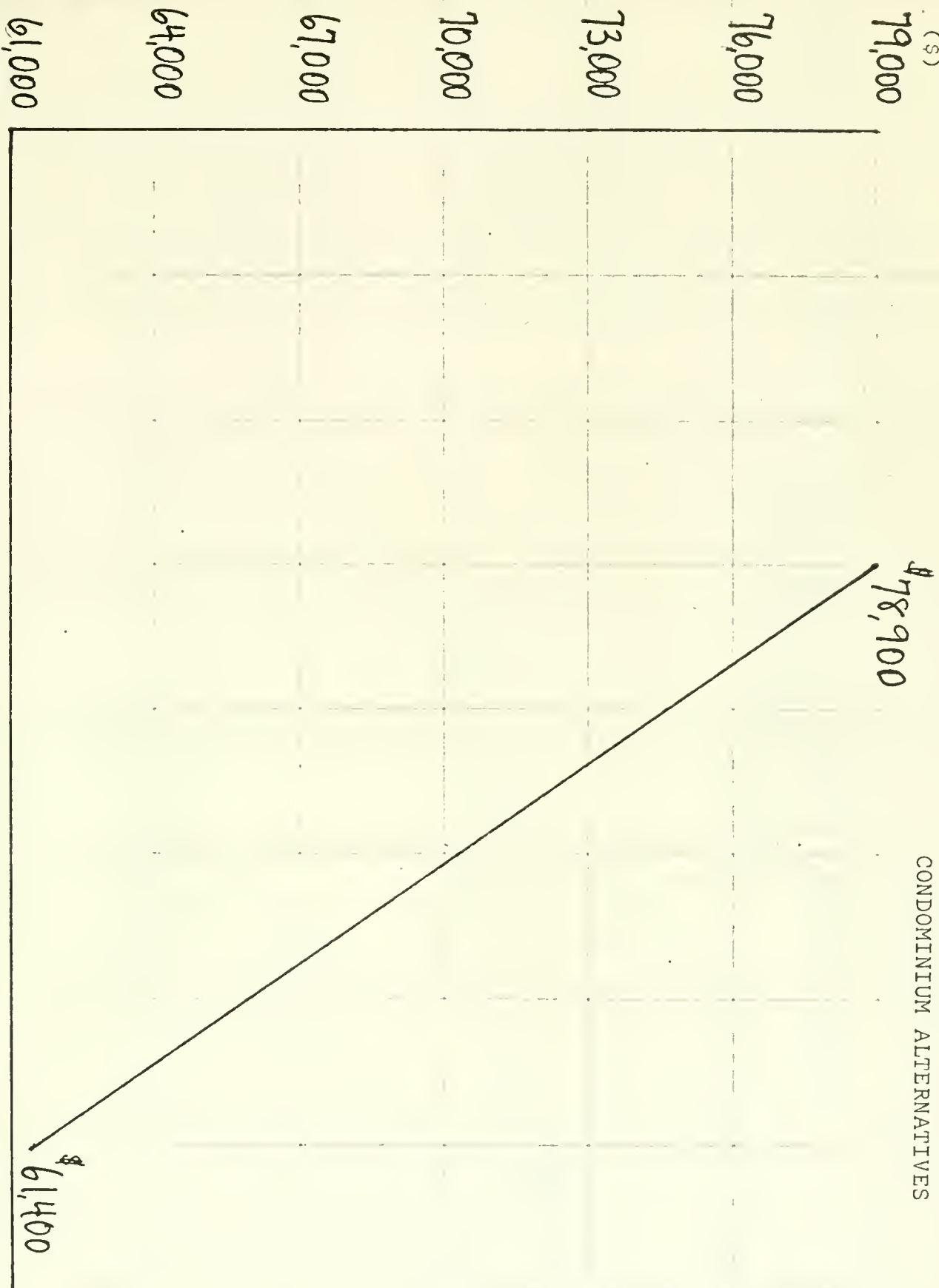
TABLE 1
THE IMPACT OF A CHANGE IN DENSITY ON RENTS
ELEVATOR BUILDING ALTERNATIVES



RENT/MONTH
(\$)

TABLE 2

IMPACT OF A CHANGE IN DENSITY,
UNIT SIZE AND DEVELOPMENT COST
ON SALES PRICE OF TOWN HOUSE
CONDOMINIUM ALTERNATIVES



TOWN HOUSE UNITS

0 50 100 150 200 250 300 350

2000 sq.ft./unit

1500 sq.ft./unit

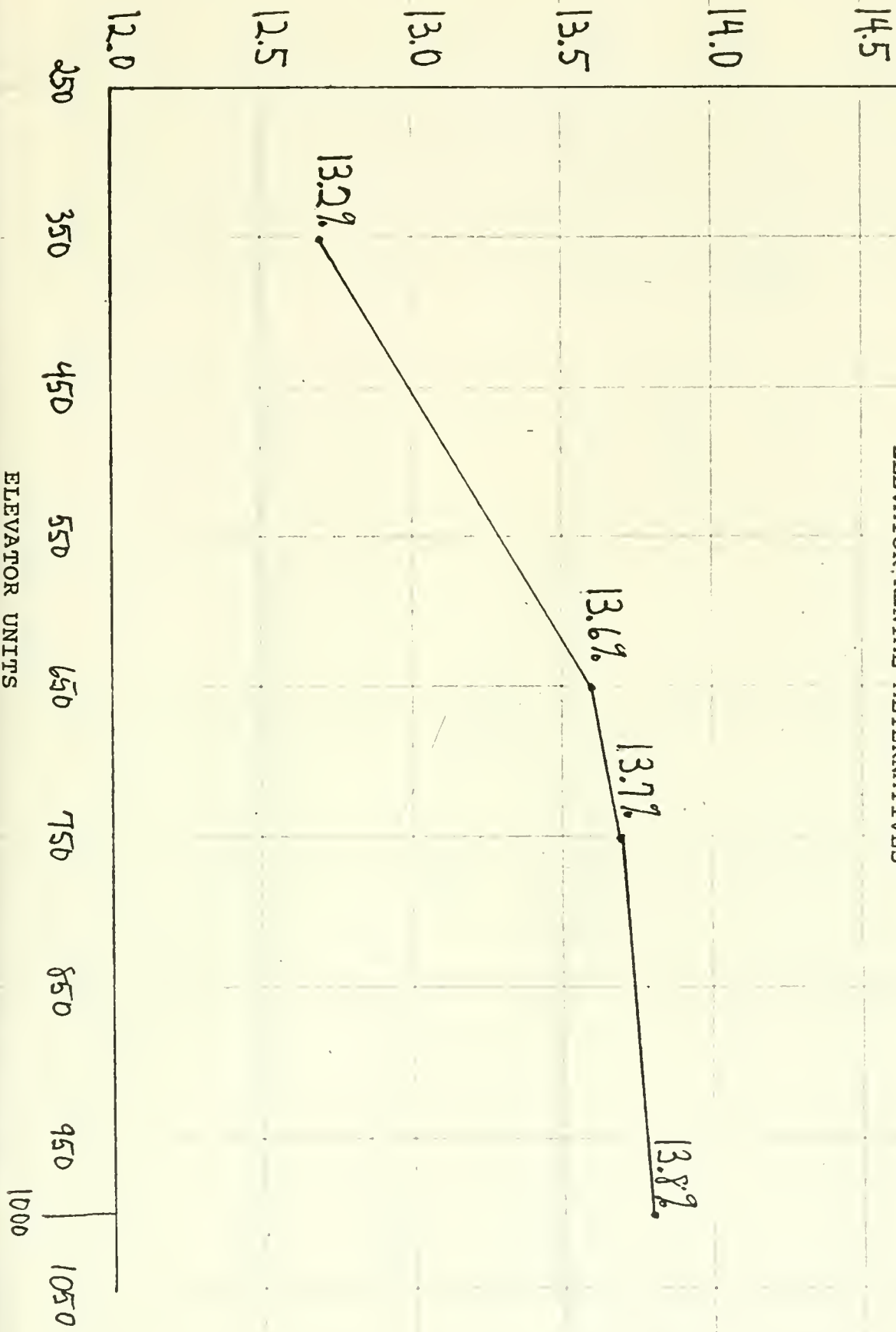
\$22/sd.ft. development cost

\$25/sd.ft. development cost

RATE OF
RETURN (%)

TABLE 3

THE IMPACT OF A CHANGE IN DENSITY ON AFTER
TAX RATE OF RETURN
ELEVATOR RENTAL ALTERNATIVES



RENT/
MONTH (\$)

TABLE 4
MARKETABILITY OF ELEVATOR RENTAL ALTERNATIVES

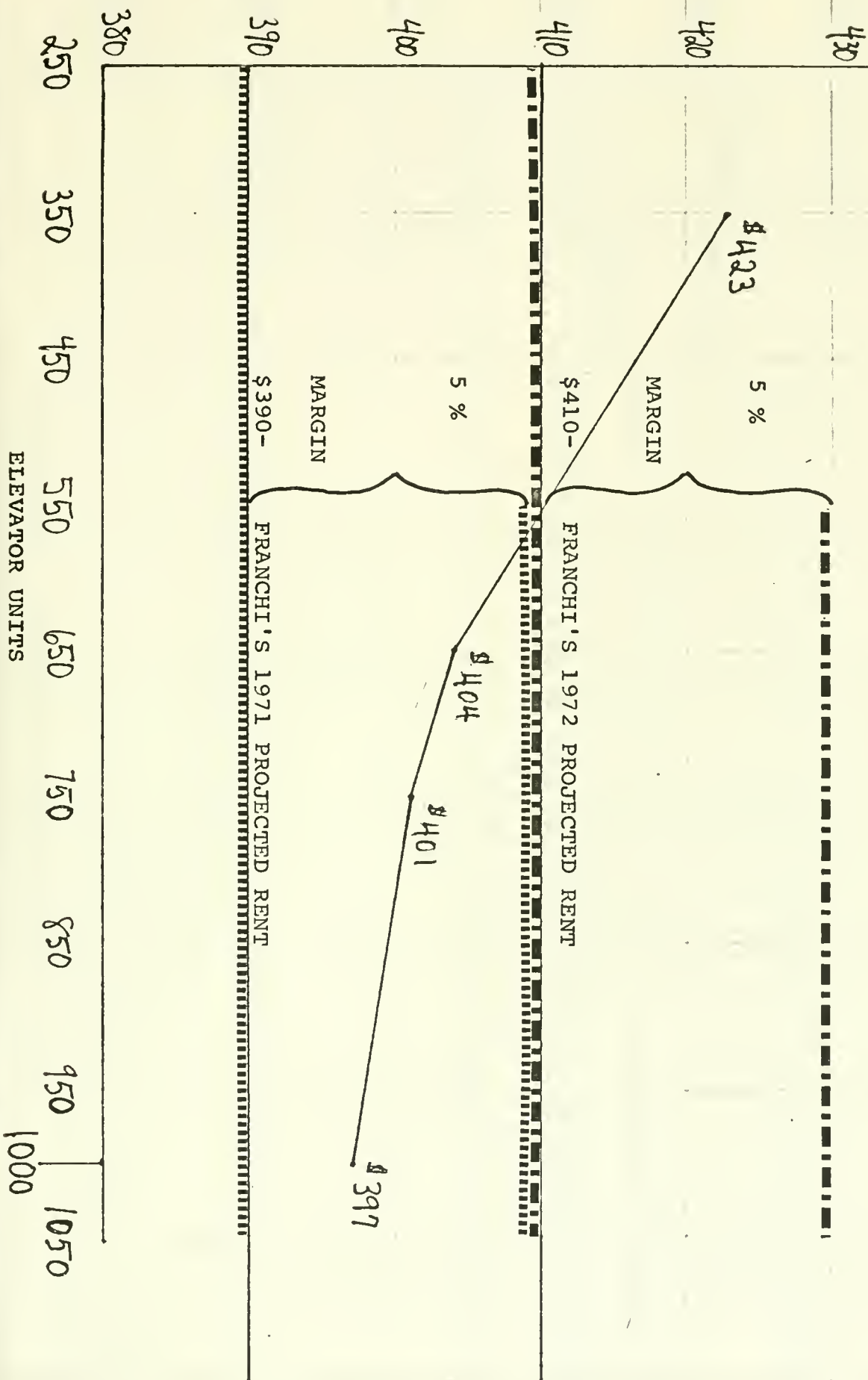


TABLE 5
MARKETABILITY OF TOWN HOUSE
CONDOMINIUM UNITS

80,000	\$ 78,900	150 UNIT CONDOMINIUM ALTERNATIVE (2000sq.ft./unit, \$22/sq.ft.devel.cost.
70,000	\$ 72,000	AVERAGE SALES PRICE OF CONDOMINIUM UNITS AT FAIRGREEN PLACE AND FULLER BROOK PARK (1900-sq.ft. average units size).
60,000	\$ 61,400 <u>\$ 61,500</u>	150 UNIT CONDOMINIUM ALTERNATIVE (1500sq.ft./unit, \$22/sq.ft.devel.cost).
50,000	\$ 55,000	350 UNIT CONDOMINIUM ALTERNATIVE (1500 sq.ft./unit, \$25/sq.ft.devel.cost).
40,000	\$ 40,000	AVERAGE SALES PRICE OF CONDOMINIUM UNITS IN GREATER BOSTON AREA.
30,000		SALES PRICE OF NEW SINGLE FAMILY HOMES, JAMAICA PLAIN

TAX
RETURN (\$)

TABLE 6 TAX RETURN TO THE CITY

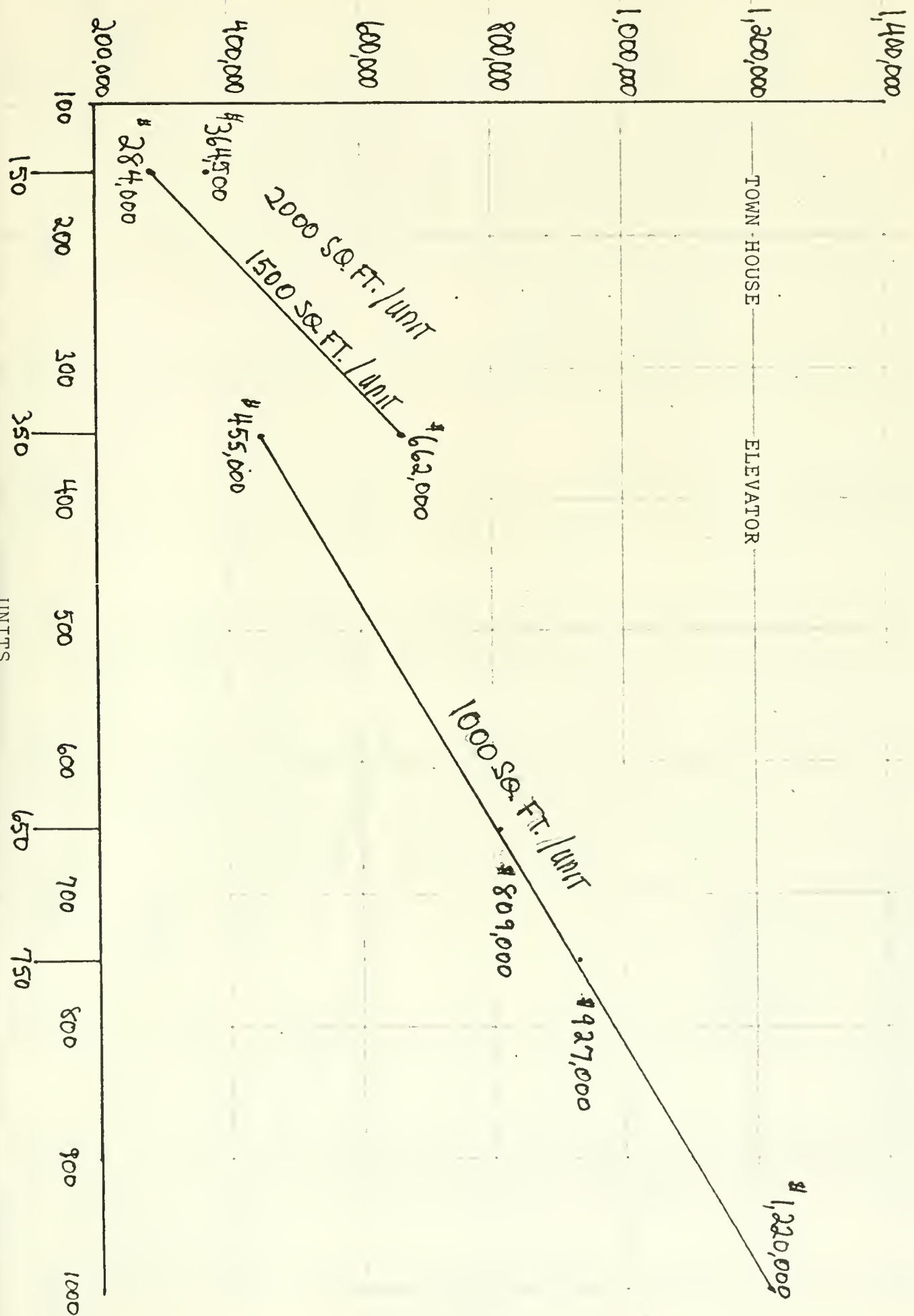


TABLE 7

RENT/MONTH

(\$)

440

430

420

410

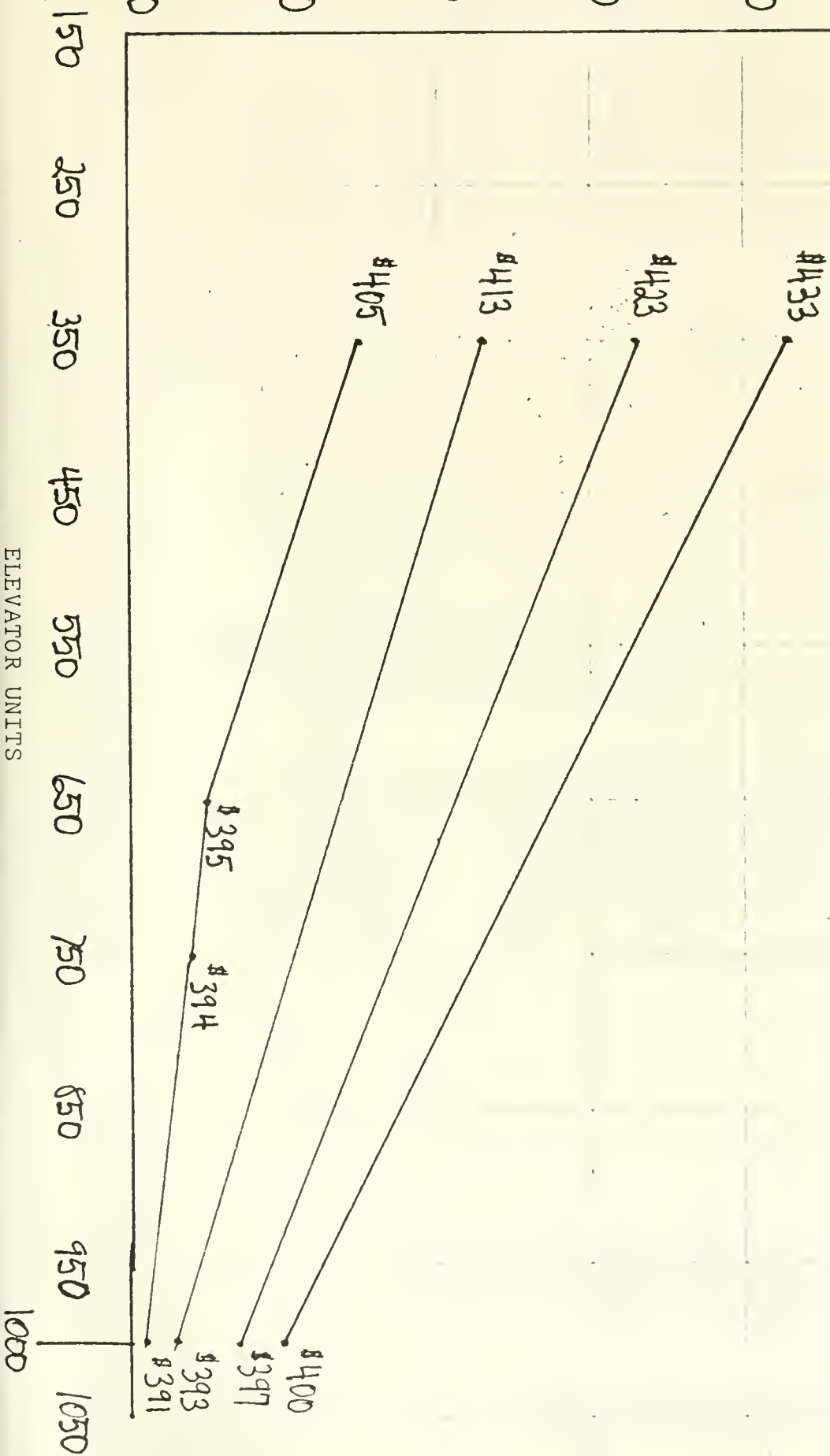
400

390

THE IMPACT OF A CHANGE IN
LAND COSTS ON ELEVATOR UNIT RENTS

LAND COST

A = \$ 600,000
 B = \$ 900,000
 C = \$1,200,000
 D = \$1,500,000



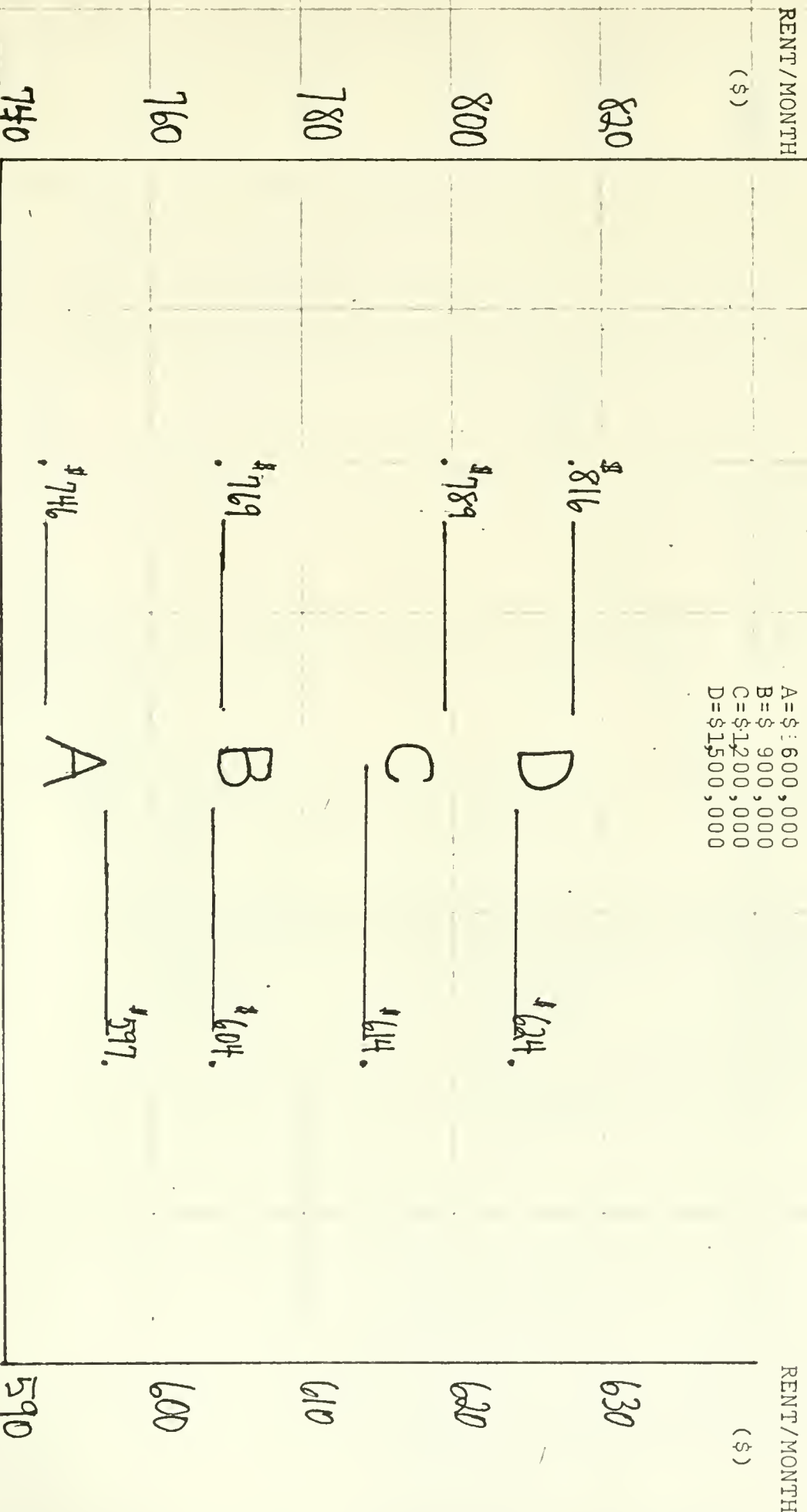
ELEVATOR UNITS

TABLE 8

THE IMPACT OF A CHANGE IN
LAND COSTS ON TOWN HOUSE
UNIT RENTS

LAND COSTS

- A = \$ 600,000
- B = \$ 900,000
- C = \$ 1,200,000
- D = \$ 1,500,000



RENT/MONTH

(\$)

RENT/MONTH

(\$)

150

350

TOWN HOUSE FRAME

TOWN HOUSE ELEVATOR

2000 sq.ft./unit

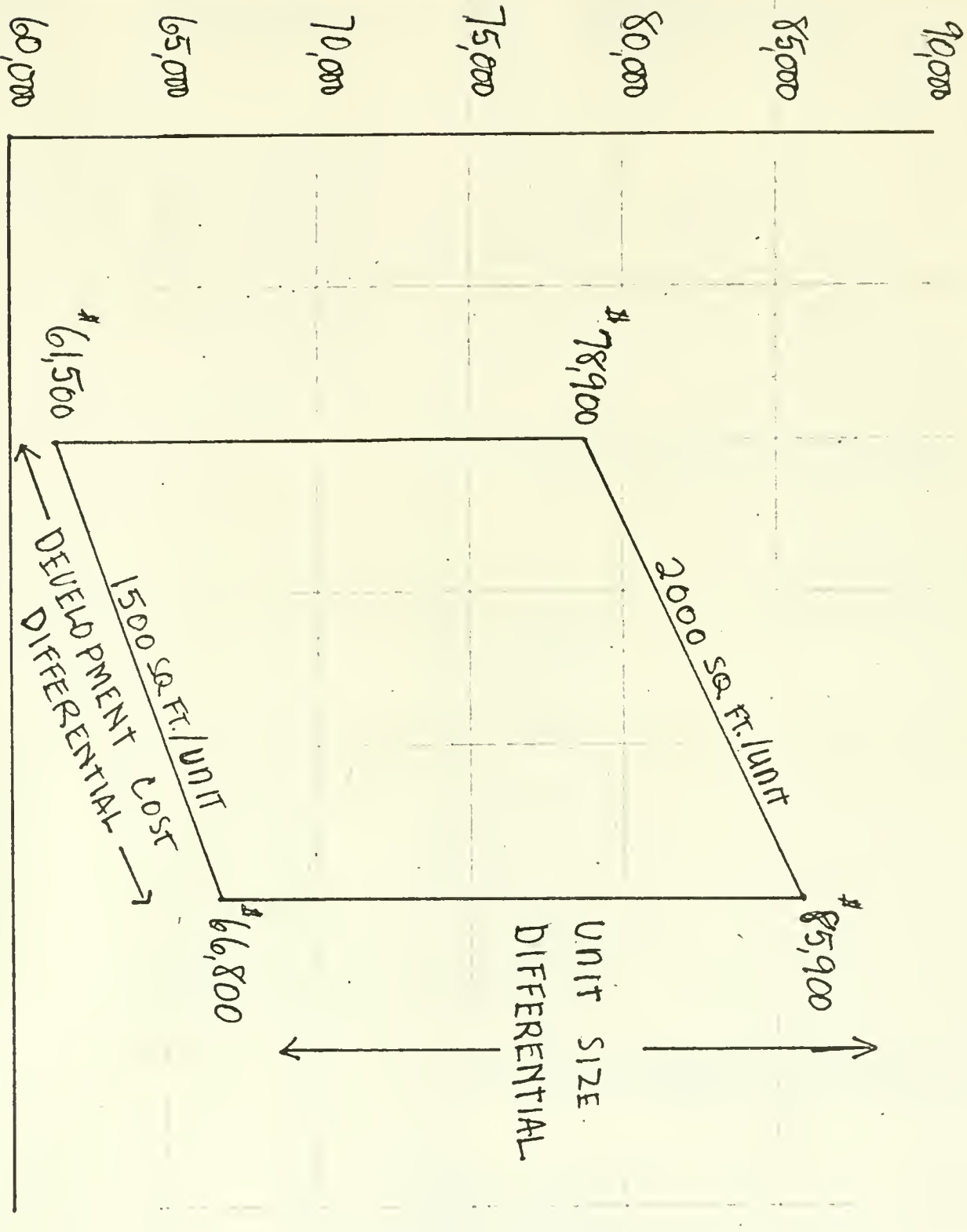
1500 sq.ft./unit

\$22 development cost/sq.ft.

\$25 development cost/sq.ft.

RENT/MONTH
(\$)

TABLE 9
150 TOWN HOUSE UNITS
THE IMPACT OF UNIT SIZE AND
DEVELOPMENT COST ON SALES PRICE



DEVELOPMENT COST/SQ. FT. (\$)

STRAIGHT LINE DEPRECIATION

ST. LINE
1000
95/10-9

HELLO-B960,BOSRE

.B. HELLO FROM TSC

READY

GET-LARRY

300 LET N=.033

380 DATA 1174250,1165860,1156680,1146650,1135670,12-123670

390 DATA 1110530,1096170,1080460,1063270,89414,97802,106977

400 DATA 117012,127989,139995,153127,167492,183203,200389

RUN

LARRY

#UNITS

7650

#PKG SPACES REQUIRED 1072.5

50/UNIT

71000

LAND COST 1.20000E+06

CONST COST 1.62500E+07

DEV COST 1.74500E+07

1ST MTG AMT 1.30875E+07

EQUITY 4.36250E+06

AV INTEREST 1.12532E+06

AV AMORT 138340.

AV DEBT SER 1.26366E+06

OPERATING EX 487500.

PROFIT

7.1

TAXES,VACANCY 969026.

GROSS INCOME 3.15644E+06

GAR INCOME 0

YEARLY INCOME/UNIT 4856.06

MONTHLY RENT 404.671

RATE DEP .033

AV DEP 536250.

NET INCOME HSG 1.70149E+06

NET INCOME GAR 0

NET CASH INCOME 1.70149E+06

BEFORE TAX RETURN EO 9.72771

NET TAX INCOME 39918.5

TAX 19959.2

RETURN ON EQUITY 12.3579

PROP TAX 809626.

END

380 DATA 669556,664773,659542,653820,647561,640715,633227,625036

390 DATA 616077,606278,50924,55767,60998,66720,72979,79825

400 DATA 87313,95504,104463,114262

RUN

LARRY

#UNITS

7350

#PKG SPACES REQUIRED 577.5

50/UNIT

71000

LAND COST 1.20000E+06

CONST COST 8.75000E+06

DEV COST 9.95000E+06

1ST MTG AMT 7.46250E+06

EQUITY 2.48750E+06

AV INTEREST 641658.

AV AMORT 78881.5

AV DEBT SER 720540.

OPERATING EX 262500.

PROFIT

7.1

TAXES,VACANCY 545685.

GROSS INCOME 1.77747E+06

GAR INCOME 0

YEARLY INCOME/UNIT 5078.5

MONTHLY RENT 423.208

RATE DEP .033

AV DEP 288750.

NET INCOME HSG 970179.

NET INCOME GAR 0

NET CASH INCOME 970179.

BEFORE TAX RETURN EO 9.72727

STRAIGHT LINE DEPRECIATION

HI-RISE

LAND COST 1.20000E+06
 CONST COST 1.75000E+06
 DEV COST 9.95090E+06
 1ST MTG AMT 7.46250E+06
 EQUITY 2.448750E+06
 AV INTEREST 641658.
 AV AMORT 78881.5
 AV DEBT SER 720540.
 OPERATING EX 262500.
 PROFIT
 7.1
 TAXES,VACANCY 545685.
 GROSS INCOME 1.77747E+06
 GAR INCOME 0
 YEARLY INCOME/UNIT 5078.5
 MONTHLY RENT 423.208
 RATE DEP .033
 AV DEP 288750.
 NET INCOME HSG 970179.
 NET INCOME GAR 0
 NET CASH INCOME 970179.
 BEFORE TAX RETURN EQ 9.72727
 NET TAX INCOME 39770.2
 TAX 19885.1
 RETURN ON EQUITY 12.0261
 PROP TAX 455922.

END
 380 DATA 1763050,1750460,1736680,1721620,1705140,1687110
 390 DATA 1667290,1645820,1622230,1596430,134249,146843,160618
 400 DATA 175685,192166,210193,229910,251477,275067,300870
 RUN
 LARRY

#UNITS
 71000
 #PKG SPACES REQUIRED 1650
 SQ/UNIT
 71000
 LAND COST 1.20000E+06
 CONST COST 2.50000E+07
 DEV COST 2.62000E+07
 1ST MTG AMT 1.96500E+07
 EQUITY 6.55000E+06
 AV INTEREST 1.68959E+06
 AV AMORT 207708.
 AV DEBT SER 1.89730E+06
 OPERATING EX 750000.
 PROFIT
 7.1
 TAXES,VACANCY 1.46292E+06
 GROSS INCOME 4.76523E+06
 GAR INCOME 0
 YEARLY INCOME/UNIT 4765.23
 MONTHLY RENT 397.102
 RATE DEP .033
 AV DEP 825000.
 NET INCOME HSG 2.55468E+06
 NET INCOME GAR 0
 NET CASH INCOME 2.55468E+06
 BEFORE TAX RETURN EQ 9.7279
 NET TAX INCOME 40091.
 TAX 20045.5
 RETURN ON EQUITY 12.5049
 PROP TAX 1.22228E+06

END
 380 DATA 1342480,1332890,1322400,1310930,1298380,1284650
 390 DATA 1269640,1253210,1235250,1215600,102225,111814,122303
 400 DATA 133776,146325,160051,175065,191487,209450,229098
 RUN
 LARRY

#UNITS
 7750
 #PKG SPACES REQUIRED 1237.5
 SQ/UNIT
 71000
 LAND COST 1.20000E+06
 CONST COST 1.87500E+07
 DEV COST 1.99500E+07
 1ST MTG AMT 1.49625E+07
 EQUITY 4.98750E+06
 AV INTEREST 1.28654E+06
 AV AMORT 158159.
 AV DEBT SER 1.44470E+06
 OPERATING EX 562500.
 PROFIT
 7.1
 TAXES,VACANCY 1.11014E+06
 GROSS INCOME 3.61609E+06
 GAR INCOME 0
 YEARLY INCOME/UNIT 4821.46
 MONTHLY RENT 401.788
 RATE DEP .033
 AV DEP 618750.
 NET INCOME HSG 1.94526E+06
 NET INCOME GAR 0
 NET CASH INCOME 1.94526E+06
 BEFORE TAX RETURN EQ 9.72777
 NET TAX INCOME 39967.5
 TAX 19983.7
 RETURN ON EQUITY 12.4131
 PROP TAX 927528.

HI RISE
DOUBLE DECLINING
BALANCE

71000
#PKG SPACES REQUIRED 1072.5
SQ/UNIT
71000
LAND COST 1.20000E+06
CONST COST 1.62500E+07.
DEV COST 1.74500E+07
1ST MTG AMT 1.30875E+07
EQUITY 4.36250E+06
AV INTEREST 1.12532E+06
AV AMORT 138340.
AV DEBT SER 1.26366E+06
OPERATING EX 487500.
PROFIT
7.1
TAXES,VACANCY 969026.
GROSS INCOME 3.15644E+06
GAR INCOME 0
YEARLY INCOME/UNIT 4856.06
MONTHLY RENT 404.671
RATE DEP .0401
AV DEP 651625.
NET INCOME HSG 1.70149E+06
NET INCOME GAR 0
NET CASH INCOME 1.70149E+06
BEFORE TAX RETURN EQ 9.72771
NET TAX INCOME-75456.5
TAX-37728.2
RETURN ON EQUITY 13.6396
PROP TAX 809626.

END
380 DATA 669556,664773,659542,653820,647561,640715,633227,625036
390 DATA 616077,60627E,50984,55767,60998,66720,72979,79825
400 DATA 87313,95504,104463,114262
RUN
LARRY

#UNITS
7350
#PKG SPACES REQUIRED 577.5
SQ/UNIT
71000
LAND COST 1.20000E+06
CONST COST 8.75000E+06
DEV COST 9.95000E+06
1ST MTG AMT 7.46250E+06
EQUITY 2.48750E+06
AV INTEREST 641658.
AV AMORT 78881.5
AV DEBT SER 720540.
OPERATING EX 262500.
PROFIT
7.1
TAXES,VACANCY 545685.
GROSS INCOME 1.77747E+06
GAR INCOME 0
YEARLY INCOME/UNIT 5078.5
MONTHLY RENT 423.208
RATE DEP .0401
AV DEP 350875.
NET INCOME HSG 970179.
NET INCOME GAR 0
NET CASH INCOME 970179.
BEFORE TAX RETURN EQ 9.72727
NET TAX INCOME-22354.7
TAX-11177.4
RETURN ON EQUITY 13.2364
PROP TAX 455922.

END
380 DATA 1763050,1750460,1736680,1721620,1705140,1687110
390 DATA 1667390,1645820,1622230,1596430,154249,146843,160618
400 DATA 175685,192166,210193,229910,251477,275067,300870
RUN
LARRY

#UNITS
71000
#PKG SPACES REQUIRED 1650
SQ/UNIT
71000
LAND COST 1.20000E+06
CONST CCST 2.50000E+07
DEV COST 2.62000E+07
1ST MTG AMT 1.96500E+07
EQUITY 6.55000E+06
AV INTEREST 1.68959E+06
AV AMORT 207708.
AV DEBT SER 1.89730E+06
OPERATING EX 750000.
PROFIT
7.1
TAXES,VACANCY 1.46293E+06
GROSS INCOME 4.76523E+06
GAR INCOME 0
YEARLY INCOME/UNIT 4765.23
MONTHLY RENT 397.102
RATE DEP .0401
AV DEP 1.00250E+06
NET INCOME HSG 2.55468E+06
NET INCOME GAR 0
NET CASH INCOME 2.55468E+06
BEFORE TAX RETURN EQ 9.7279
NET TAX INCOME-122002.

AV AMORT 7MPRI.5
AV DEBT SER 720540.
OPERATING EX 262500.
PROFIT
7.1
TAXES,VACANCY 545685.
GROSS INCOME 1.77747E+06
GAR INCOME 0
YEARLY INCOME/UNIT 5078.5
MONTHLY RENT 423.208
RATE DEP .0401
AV DEP 350875.
NET INCOME HSG 970179.
NET INCOME GAR 0
NET CASH INCOME 970179.
BEFORE TAX RETURN EO 9.72727
NET TAX INCOME-22354.7
TAX-11177.4
RETURN ON EQUITY 13.2364
PROP TAX 455222.

END
380 DATA 1763050,1750460,1736680,1721620,1705140,1687110
390 DATA 1667390,1645820,1622230,1596430,134249,146843,160618
400 DATA 175685,192166,210193,229910,251477,275067,300870
RUN
LARRY

#UNITS
71000
#PKG SPACES REQUIRED 1650
SQ/UNIT
71000
LAND COST 1.20000E+06
CONST COST 2.50000E+07
DEV COST 2.62000E+07
1ST MTG AMT 1.96500E+07
EQUITY 6.55000E+06
AV INTEREST 1.68959E+06
AV AMORT 207708.
AV DEBT SER 1.89730E+06
OPERATING EX 750000.
PROFIT
7.1
TAXES,VACANCY 1.46292E+06
GROSS INCOME 4.76523E+06
GAR INCOME 0
YEARLY INCOME/UNIT 4765.23
MONTHLY RENT 397.102
RATE DEP .0401
AV DEP 1.00250E+06
NET INCOME HSG 2.55468E+06
NET INCOME GAR 0
NET CASH INCOME 2.55468E+06
BEFORE TAX RETURN EO 9.7279
NET TAX INCOME-137409.
TAX-68704.5
RETURN ON EQUITY 13.8182
PROP TAX 1.22228E+06

END
380 DATA 1342480,1332890,1322400,1310930,1298380,1284650
390 DATA 1269640,1253210,1235280,1215600,102225,111814,122303
400 DATA 133776,146325,160051,175065,191487,209450,229098
RUN
LARRY

#UNITS
7750
#PKG SPACES REQUIRED 1237.5
SQ/UNIT
71000
LAND COST 1.20000E+06
CONST COST 1.87500E+07
DEV COST 1.99500E+07
1ST MTG AMT 1.49625E+07
EQUITY 4.98750E+06
AV INTEREST 1.28654E+06
AV AMORT 158159.
AV DEBT SER 1.44470E+06
OPERATING EX 562500.
PROFIT
7.1
TAXES,VACANCY 1.11014E+06
GROSS INCOME 3.61609E+06
GAR INCOME 0
YEARLY INCOME/UNIT 4821.46
MONTHLY RENT 401.788
RATE DEP .0401
AV DEP 751875.
NET INCOME HSG 1.94526E+06
NET INCOME GAR 0
NET CASH INCOME 1.94526E+06
BEFORE TAX RETURN EO 9.72777
NET TAX INCOME-93157.5
TAX-46578.7
RETURN ON EQUITY 13.7066
PROP TAX 927528.

H1 RISE
DOUBLE DECLINING
BALANCE

750

END
BYE
018 MINUTES OF TERMINAL TIME.

HI-RISE

(Land)
rel,

LAND COST AS VARIABLE

50 LET C=900000
380 DATA 1742860,1730410,1716800,1701900,1685610,1667790
390 DATA 1648300,1626980,1603660,15782150,132714,145163
400 DATA 158780,173674,189967,207787,227276,248599,271920
410 DATA 297428
RUN
LARRY

#UNITS
71000
#PKG SPACES REQUIRED 1650
SQ/UNIT
71000
LAND COST 900000.
CONST COST 2.50000E+07
DEV COST 2.59000E+07
1ST MTG AMT 1.94250E+07
EQUITY 6.47500E+06
AV INTEREST 1.67025E+06
AV AMORT 205331.
AV DEBT SER 1.87558E+06
OPERATING EX 750000.
PROFIT
7.1
TAXES,VACANCY 1.44998E+06
GROSS INCOME 4.72306E+06
GAR INCOME 0
YEARLY INCOME/UNIT 4723.06
MONTHLY RENT 393.588
RATE DEP .033
AV DEP 825000.
NET INCOME HSG 2.52544E+06
NET INCOME GAR 0
NET CASH INCOME 2.52544E+06
BEFORE TAX RETURN EQ 9.72799
NET TAX INCOME 30193.5
TAX 15096.7
RETURN ON EQUITY 12.5757
PROP TAX 1.21146E+06

900,000

END
380 DATA 649189,644552,639480,633932,627863,627863\
380 DATA 649189,644552,639480,633932,627863,621226,613965,606024
390 DATA 597338,587836,49433,54070,59142,64690,70759,77396
400 F-DATA 84657,92598,101285,110786
RUN
LARRY

#UNITS
7350
#PKG SPACES REQUIRED 577.5
SQ/UNIT
71000
LAND COST 900000.
CONST COST 8.75000E+06
DEV COST 9.65000E+06
1ST MTG AMT 7.23750E+06
EQUITY 2.41250E+06
AV INTEREST 622140.
AV AMORT 76481.6
AV DEBT SER 698622.
OPERATING EX 262500.
PROFIT
7.1
TAXES,VACANCY 532653.
GROSS INCOME 1.73502E+06
GAR INCOME 0
YEARLY INCOME/UNIT 4957.21
MONTHLY RENT 413.101
RATE DEP .033
AV DEP 288750.
NET INCOME HSG 940740.
NET INCOME GAR 0
NET CASH INCOME 940740.
BEFORE TAX RETURN EQ 9.72758
NET TAX INCOME 29849.2
TAX 14924.6
RETURN ON EQUITY 12.2008
PROP TAX 445034.

900,000

END
50 LET C=1000000

H1 - Rise

LAND COST
AS VARIABLE

LAND COST 900000.
CONST COST 8.75000E+06
DEV COST 9.65000E+06
1ST MTG AMT 7.23750E+06
EQUITY 2.41250E+06
AV INTEREST 622140.
AV AMORT 76481.6
AV DEBT SER 698622.
OPERATING EX 262500.
PROFIT
7.1
TAXES,VACANCY 532653.
GROSS INCOME 1.73502E+06
GAR INCOME 0
YEARLY INCOME/UNIT 4957.21
MONTHLY RENT 413.101
RATE DEP .033
AV DEP 288750.
NET INCOME HSG 940740.
NET INCOME GAR 0
NET CASH INCOME 940740.
BEFORE TAX RETURN EQ 9.72758
NET TAX INCOME 29849.2
TAX 14924.6
RETURN ON EQUITY 12.2008
PROP TAX 445034.

END
50 LET C=1500000
380 DATA 1783240,1770500,1756570,1741330,1724660,1706430
390 DATA 1686480,1664670,1640810,1614710,135787,148525
400 DATA 162458,177698,194367,212600,232543,254357,278217,304316
RUN
LARRY

#UNITS
71000
#PKG SPACES REQUIRED 1650
SQ/UNIT
71000
LAND COST 1.50000E+06
CONST COST 2.50000E+07
DEV COST 2.65000E+07
1ST MTG AMT 1.98750E+07
EQUITY 6.62500E+06
AV INTEREST 1.70894E+06
AV AMORT 210087.
AV DEBT SER 1.91903E+06
OPERATING EX 750000.
PROFIT
7.1
TAXES,VACANCY 1.47587E+06
GROSS INCOME 4.80740E+06
GAR INCOME 0
YEARLY INCOME/UNIT 4807.4
MONTHLY RENT 400.617
RATE DEP .033
AV DEP 825000.
NET INCOME HSG 2.58393E+06
NET INCOME GAR 0
NET CASH INCOME 2.58393E+06
BEFORE TAX RETURN EQ 9.7278
NET TAX INCOME 49990.5
TAX 24995.2
RETURN ON EQUITY 12.4358
PROP TAX 1.23310E+06

1,500,000

END
380 DATA 689743,684817,679428,673533,667085,660033,652319
390 DATA 643882,634652,624558,52521,57448,62837,68732,75179
400 DATA 82232,89946,98383,107613,117707
RUN
LARRY

#UNITS
7350
#PKG SPACES REQUIRED 577.5
SQ/UNIT
71000
LAND COST 1.50000E+06
CONST COST 8.75000E+06
DEV COST 1.02500E+07
1ST MTG AMT 7.68750E+06
EQUITY 2.56250E+06
AV INTEREST 661005.
AV AMORT 81259.8
AV DEBT SER 742265.
OPERATING EX 262500.
PROFIT
7.1
TAXES,VACANCY 558631.
GROSS INCOME 1.81965E+06
GAR INCOME 0
YEARLY INCOME/UNIT 5198.99
MONTHLY RENT 433.249
RATE DEP .033
AV DEP 288750.
NET INCOME HSG 999425.
NET INCOME GAR 0
NET CASH INCOME 999425.
BEFORE TAX RETURN EQ 9.72705
NET TAX INCOME 49609.7
TAX 24834.0
RETURN ON EQUITY 11.8613
PROP TAX 406139.

1,500,000

Assume \$22/ft²
Construction cost

Townhouse

UNIT SIZE VARIABLE, CONSTRUCTION COST VARIABLE

Assume \$25/ft

Townhouse

50 LET C=1200000
380 DATA 68079,6768
380 DATA 459268,455988,452399,448474,444181,439485,434349
390 DATA 428731,422586,415864,4-34971,38252,41840,45765
400 DATA 50058,54754,59890,65509,71654,78375
RUN
LARRY

#UNITS
7150
#PKG SPACES REQUIRED 247.5
SQ/UNIT
71500
LAND COST 1.20000E+06
CONST COST 5.62500E+06
DEV COST 6.82500E+06
1ST MTG AMT 5.11875E+06
EQUITY 1.70625E+06
AV INTEREST 440132.
AV AMORT 54106.8
AV DEBT SER 494239.
OPERATING EX 168750.
PROFIT
7.1
TAXES,VACANCY 369292.
GROSS INCOME 1.20291E+06
GAR INCOME 0
YEARLY INCOME/UNIT 8019.38
MONTHLY RENT 668.281
RATE DEP .033
AV DEP 185625.
NET INCOME HSG 665466.
NET INCOME GAR 0
NET CASH INCOME 665466.
BEFORE TAX RETURN EO 9.72681
NET TAX INCOME 39708.4
TAX 19854.2
RETURN ON EQUITY 11.6726
PROP TAX 308546.

END
380 DATA 585441,581259,576685,571681,566209,560222,553675
390 DATA 546513,538680,530112,44579,48761,53335,58338,63811
400 DATA 69797,76344,83506,91340,99908
RUN
LARRY

#UNITS
7150
#PKG SPACES REQUIRED 247.5
SQ/UNIT
72000
LAND COST 1.20000E+06
CONST COST 7.50000E+06
DEV COST 8.70000E+06
1ST MTG AMT 6.52500E+06
EQUITY 2.17500E+06
AV INTEREST 561048.
AV AMORT 68971.9
AV DEBT SER 630020.
OPERATING EX 225000.
PROFIT
7.1
TAXES,VACANCY 475128.
GROSS INCOME 1.54765E+06
GAR INCOME 0
YEARLY INCOME/UNIT 10317.7
MONTHLY RENT 859.804
RATE DEP .033
AV DEP 247500.
NET INCOME HSG 848294.
NET INCOME GAR 0
NET CASH INCOME 848294.
BEFORE TAX RETURN EO 9.72713
NET TAX INCOME 39746.
TAX 19873
RETURN ON EQUITY 11.9152
PROP TAX 396972.

END
380 DATA 903950,947073,940541,941303,932292,922436,911655,899003
390 DATA 88500,872857,73-61,80397,87819,96057,105007,114925
400 DATA 1-3700,137400,130000,164504
RUN

1500 ft

2000 ft

Townhouse

LAND COST VARIABLE

RUN
LARRY

#UNITS
7150
#PKG SPACES REQUIRED 247.5
SQ/UNIT
71500
LAND COST 900000.
CONST COST 5.62500E+06
DEV COST 6.52500E+06
1ST MTG AMT 4.89375E+06
EQUITY 1.63125E+06
AV INTEREST 420786.
AV AMORT 51728.7
AV DEBT SER 472515.
OPERATING EX 168750.
PROFIT
7.1
TAXES,VACANCY 356346.
GROSS INCOME 1.16074E+06
GAR INCOME 0
YEARLY INCOME/UNIT 7738.24
MONTHLY RENT 644.853
RATE DEP .033
AV DEP 185625.
NET INCOME HSG 636220.
NET INCOME GAR 0
NET CASH INCOME 636220.
BEFORE TAX RETURN EQ 9.72712
NET TAX INCOME 29809
TAX 14904.5
RETURN ON EQUITY 11.9152
PROP TAX 297729.

END
380 DATA 943771,937029,929656,921590,912768,903118,8926563
390 DATA 881018,868390,854578,71865,7806,85980,94046
400 DATA 102868,112518,123073,134618,147246,161059
RUN
LARRY

#UNITS
7350
#PKG SPACES REQUIRED 577.5
SQ/UNIT
71500
LAND COST 900000.
CONST COST 1.31250E+07
DEV COST 1.40250E+07
1ST MTG AMT 1.05187E+07
EQUITY 3.50625E+06
AV INTEREST 904448.
AV AMORT 111188.
AV DEBT SER 1.01564E+06
OPERATING EX 393750.
PROFIT
7.1
TAXES,VACANCY 779687.
GROSS INCOME 2.53970E+06
GAR INCOME 0
YEARLY INCOME/UNIT 7256.28
MONTHLY RENT 604.69
RATE DEP .033
AV DEP 433125.
NET INCOME HSG 1.36753E+06
NET INCOME GAR 0
NET CASH INCOME 1.36753E+06
BEFORE TAX RETURN EQ 9.72774
NET TAX INCOME 29958
TAX 14979
RETURN ON EQUITY 12.3873
PROP TAX 651433.

END
50LET C=1500000
380 DATA 479456,476031,472285,468188,463706,458804,453442,447577
390 DATA 441161,434144,36509,39933,43679,47776,52258,57160
400 DATA 62523,68388,74803,81820
RUN
LARRY

#UNITS
7150
#PKG SPACES REQUIRED 247.5
SQ/UNIT
71500
LAND COST 1.50000E+06
CONST COST 5.62500E+06
DEV COST 7.12500E+06
1ST MTG AMT 5.34375E+06
EQUITY 1.78125E+06
AV INTEREST 459479.
AV AMORT 56484.9
AV DEBT SER 515964.
OPERATING EX 168750.
PROFIT
2.1
TAXES,VACANCY 382239.
GROSS INCOME 1.24508E+06
GAR INCOME 0
YEARLY INCOME/UNIT 6300.52
MONTHLY RENT 691.71
RATE DEP .033
AV DEP 185625.

Townhouse

1500
1500
operating land

add.

str-

350
1500

900,000

str.

150
1500
1.311



